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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/936,531	09/11/2001	Yvan Strauven	U.MINIERE-03	4239
42253	7590	10/14/2004	EXAMINER	
MISHRILAL JAIN 11620 MASTERS RUN ELLCOTT CITY, MD 21042			CREPEAU, JONATHAN	
			ART UNIT	PAPER NUMBER
			1746	
DATE MAILED: 10/14/2004				

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

09/936,531

Applicant(s)

STRAUVEN ET AL.

Examiner

Jonathan S. Crepeau

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 04 August 2004.
- 2a) ☒ This action is FINAL. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-17 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-17 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

## **DETAILED ACTION**

### ***Response to Amendment***

1. This Office action addresses claims 1-10 and newly added claims 11-17. Applicant's declaration under 37 CFR 1.132 is sufficient to overcome the rejection over WO '502. However, claims 1-10 remain rejected for the reasons of record over WO '502 in view of JP '379, and claims 11-17 are newly rejected for these reasons. Accordingly, this action is made final.

### ***Claim Rejections - 35 USC § 103***

2. Claims 1-17 are rejected under 35 U.S.C. 103(a) as being unpatentable over WO 94/19502 in view of JP 1-52379.

Regarding claim 5, WO '502 is directed to an alkaline battery comprising an anode, cathode, and electrolyte (see claim 23 of the reference). Regarding claim 1, the anode comprises a zinc alloy having a composition which anticipates each of the claimed compositions (a), (b), and (c). For example, the alloy disclosed at page 5, line 30, which contains 70 ppm (0.007 wt%) Al and 250 ppm (0.025 wt%) Bi, anticipates alloy (c) of instant claim 1. The alloy disclosed at page 6, line 12 (0.007 wt% Al, 0.025 wt% In) anticipates alloy (a) of instant claim 1. The alloy disclosed at page 6, line 21 (0.003 wt% Al, 0.025 wt% In, 0.025 wt% Bi) anticipates alloy (b) of instant claims 1 and 2. Regarding claim 6, the powder comprises metal cemented out of the

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electrolyte (see claim 24 of the reference). Regarding claim 1, the powder can be made by a centrifugal atomization process (see page 3, line 30).

WO '502 does not expressly teach that the centrifugal atomization process is carried out in an atmosphere with a relatively low (i.e., <4vol%) oxygen content, as recited in claims 1, 3, 4, 7, 8, 9, and 10.

JP '379 is directed to a zinc alloy powder for an alkaline battery (see abstract). The powder is manufactured by atomizing the molten zinc alloy in a low oxygen concentration (<4vol%) atmosphere (see abstract).

Therefore, the invention as a whole would have been obvious to one of ordinary skill in the art at the time the invention was made because the disclosure of JP '379 would motivate the artisan to conduct the centrifugal atomization of WO '502 in an atmosphere containing less than 4 vol% oxygen. In the abstract, JP '379 teaches that the purpose of this atmosphere is "to retard hydrogen gas evolution in spite of a low mercury content." Accordingly, the artisan would be motivated to conduct the centrifugal atomization of WO '502 in an atmosphere containing less than 4 vol% oxygen.

### ***Response to Arguments***

3. Applicant's arguments filed August 4, 2004 have been fully considered but they are not persuasive insofar as they apply to the present rejection. Applicant asserts that the skilled person would not be motivated to look to a reference disclosing the production of Hg-amalgamated

powders (JP '379) to modify a reference teaching non-amalgamated powders (WO '502).

However, as noted above, in the abstract, JP '379 teaches that the purpose of the low oxygen-content atmosphere is "to retard hydrogen gas evolution in spite of a low mercury content."

Therefore, the abstract fairly suggests that the low oxygen-content atmosphere is the *source* of the improvement of the powder of JP '379. The artisan would thus be sufficiently motivated to apply this teaching to similar powders in hopes of obtaining a similar improvement. In fact, the abstract of JP '319 appears to teach away from using a large amount of mercury. Thus, the difference in mercury content between the two references is not seen as a critical issue that would dissuade an artisan from combining the references. Similarly, the other elements in the composition of JP '379, e.g., gallium, are also not seen as a critical issue when combining the references. As stated above, it is believed that JP '379 provides sufficient motivation to apply the teaching of low content-atmosphere to *any* zinc alloy having a similar composition. The Examiner would look favorably upon results showing an unexpected improvement in the claimed compositions made by the claimed method, as opposed to similar compositions (e.g., those of JP '379 or some of those of WO '502) also made by the claimed method. In other words, Applicants should show that their specific composition *in addition to* the low oxygen-content atmosphere produces an unexpected result. Currently, because the prior art fairly suggests a low-oxygen atmosphere for a variety of zinc alloys, merely relying on results wherein a low-oxygen atmosphere is the only variable is not sufficient to overcome the outstanding rejection.

As an additional note, a full translation of JP '379 has been ordered and should be available within a few weeks. If Applicants wish to review the translation prior to responding to this Office action, they are respectfully requested to contact the Examiner.

### *Conclusion*

4. THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jonathan Crepeau whose telephone number is (571) 272-1299. The examiner can normally be reached Monday-Friday from 9:30 AM - 6:00 PM EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Barr, can be reached at (571) 272-1414. The phone number for the

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organization where this application or proceeding is assigned is (571) 272-1700. Documents may be faxed to the central fax server at (703) 872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Jonathan Crepeau  
Primary Examiner  
Art Unit 1746  
October 8, 2004